

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)

SETI-0006

Application Number

Applicant(s)

Fareed et al.

Filing Date

Group Art Unit

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		US006359292B1	03-2002	Sugawara et al.			
		US006316793B1	11-2001	Sheppard et al.			
		US005981977A	11-1999	Furukawa et al.			
		US005851905A	12-1998	McIntosh et al.			

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		"High-Power Microwave GaN/AlGa <sub>N</sub> HEMT's on Semi-Insulating Silicon Carbide Substrates," S. T. Sheppard et al., IEEE Electron Device Letters, Vol. 20, No. 4, April 1999, pp. 161-163.
		"High Performance Microwave Power GaN/AlGa <sub>N</sub> MODFETs Grown By RF-Assisted MBE," N.X. Nguyen et al., Electronics Letters, Vol. 36, No. 5, 2nd March 2000, pp. 468-469.

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	"High Electron Mobility Transistor Based on a GaN-AlxGa1-xN Heterojunction," M. Asif Khan et al., Applied Physics Letters, Vol. 63, No. 9, 30 August 1993, pp. 1214-1215.
	"AlGaIn/GaN Metal Oxide Semiconductor Heterostructure Field Effect Transistor," M. Asif Khan et al., IEEE Electron Device Letters, Vol. 21, No. 2, February 2000, pp. 63-65.
	"AlGaIn/GaN Metal-Oxide-Semiconductor Heterostructure Field-Effect Transistors on SiC Substrates," M. Asif Khan et al., Applied Physics Letters, Vol. 77, No. 9, 28 August 2000, pp.1339-1341.
	"Si3N4/AlGaIn/GaN - Metal-Insulator-Semiconductor Heterostructure Field-Effect Transistors," X. Hu et al., Applied Physics Letters, Vol. 79, No.17, 22 October 2001, pp. 2832-2834.
	"Insulating Gate III-N Heterostructure Field-Effect Transistors for High-Power Microwave and Switching Applications," M. Asif Khan et al., IEEE Transactions On Microwave Theory and Techniques, Vol. 51, No. 2, February 2003, pp. 624-633.
	"Low Frequency Noise in GaN Metal Semiconductor and Metal Oxide Semiconductor Field Effect Transistors," S. L. Rumyantsev et al., Journal of Applied Physics, Vol. 90, No. 1, 1 July 2001, pp. 310-314.
	"Induced Strain Mechanism of Current Collapse in AlGaIn/GaN Heterostructure Field-Effect Transistors," G. Simin et al., American Institute of Physics, Applied Physics Letters, Vol. 79, No. 16, 15 October 2001, pp. 2651-2653.
	"Elastic Strain Relaxation and Piezoeffect in GaN-AlN, GaN-AlGaIn and GaN-InGaIn Superlattices," A.D. Bykhovski et al., Journal of Applied Physics, Vol. 81, No. 9, 1 May 1997, pp. 6332-6338.
	"Two Dimensional Electron Gas Enhancement in AlGaIn/GaN/InGaIn/GaN Quantum Well Structures," A. D. Bykhovski et al., Proceedings of 1999 International Device Research Symposium (ISDRS-99), ISBN 1-880920-06-9, pp. 307-310 (1999).
	"Novel AlN/GaN Insulated Gate Heterostructure Field Effect Transistor with Modulation Doping and One-Dimensional Simulation of Charge Control," Syunji Imanaga et al., Journal of Applied Physics, Vol. 82, No. 11, 1 December 1997, pp. 5843-5858.
	"Enhanced Electron Mobility in AlGaIn/InGaIn/AlGaIn Double-Heterostructures by Piezoelectric Effect," Narihiko Maeda et al., Japanese Journal of Applied Physics, Vol. 38, Part 2, No. 7B, 15 July 1999, pp. L799-L801.
	"AlGaIn/InGaIn/GaN Double Heterostructure Field-Effect Transistor," Grigory Simin et al., The Japan Society of Applied Physics, Japanese Journal of Applied Physics, Vol. 40, Part 2, No. 11A, 1 November 2001, pp. L1142-L1144.
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"Low Frequency Noise in AlGaIn/InGaIn/GaN Double Heterostructure Field Effect Transistors," N. Pala et al., Solid-State Electronics 47 (2003), pp. 1099-1104.

"Low-Frequency Noise in GaN-Based Field Effect Transistors," M. E. Levinshtein et al., Noise and Fluctuations in Control in Electronic Devices, Chapter 4, 2002, pp. 49-65.

"Energy Band/Lattice Mismatch Engineering in Quaternary AlInGaIn/GaN Heterostructure," M. Asif Khan et al., Phys. Stat. Sol. (a) 176, 227 (1999), pp. 227-230.

"Pulsed Atomic Layer Epitaxy of Quaternary AlInGaIn Layers," J. Zhang et al., Applied Physics Letters, Vol. 79, No. 7, 13 August 2001, pp. 925-927.

"Piezoelectric Doping and Elastic Strain Relaxation in AlGaIn-GaN Heterostructure Field Effect Transistors," A. D. Bykhovski et al., Applied Physics Letters, Vol. 73, No. 24, 14 December 1998, pp. 3577-3579.

"Piezoelectric Doping in AlInGaIn/GaN Heterostructures," M. Asif Khan et al., Applied Physics Letters, Vol. 75, No. 18, 1 November 1999, pp. 2806-2808.

"III-Nitride, SiC and Diamond Materials for Electronic Devices," D. Kurt Gaskill et al., Materials Research Society Symposium Proceedings Vol. 423, 1996, pp. 75-79.

"Pyroelectric and Piezoelectric Properties of GaN-Based Materials," M. S. Shur et al., MRS Internet J. Nitride Semicond. Res. 4S1, G1.6 (1999) pp. 1-12.

"Electron Transport in Wurtzite Indium Nitride," O'Leary et al., Journal of Applied Physics, Vol. 83, No. 2, 15 January 1998, pp. 826-829.

"Piezoeffect and Gate Current in AlGaIn/GaN High Electron Mobility Transistors," R. Gaska et al., Applied Physics Letters, Vol. 71, No. 25, 22 December 1997, pp. 3673-3675.

"Two-Dimensional Electron-Gas Density in Al<sub>x</sub>Ga<sub>1-x</sub>N/GaN Heterostructure Field-Effect Transistors," N. Maeda et al., Applied Physics Letters, Vol. 73, No. 13, 28 September 1998, pp. 1856-1858.

"Piezoelectric Charge Densities in AlGaIn/GaN HFETs," P.M. Asbeck et al., Electronics Letters, Vol. 33, No. 14, 3 July 1997, pp. 1230-1231.

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"GaAs Devices and Circuits," M. S. Shur, Microdevices Physics and Fabrication Technologies, Plenum Publishing Corporation, New York (1987) p. 410.

"The Influence of the Strain-Induced Electric Field on the Charge Distribution in GaN-AlN-GaN Structure," Bykhovski et al., Journal of Applied Physics, Vol. 74, No. 11, 1 December 1993, pp. 6734-6739.

"Pyroelectricity in Gallium Nitride Thin Films," Bykhovski et al., Applied Physics Letters, Vol. 69, No. 21, 18 November 1996, pp. 3254-3256.

"Lattice and Energy Band Engineering in AlInGaN/GaN Heterostructures," M. Asif Khan et al., Applied Physics Letters, Vol. 76, No. 9, 28 February 2000, pp. 1161-1163.

"Electron Mobility in Modulation-Doped AlGaIn-GaN Heterostructures," R. Gaska et al., Applied Physics Letters, Vol. 74, No. 2, 11 January 1999, pp. 287-289.

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